

REMARKS

Applicant has received and reviewed the Final Office Action mailed by the Office on February 27, (hereinafter, "Final Action"), and submits this response to the Final Action with a request for continued examination (RCE).

Claims 1-20 remain pending in the present application and are for consideration upon entry of the present Amendment. Applicant amends Claims 1, 5, 9-12, 19, and 20 to clarify claimed subject matter and/or correct informalities. The original specification and drawings support these claim amendments at least at page 12 and in Figures 1, 20, and 25. Therefore, these revisions introduce no new matter and does not change the scope of the claims.

Applicant respectfully requests reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks.

Claim Rejections 35 U.S.C. §101

Claims 9, 10, 11, 12, 19, and 20 stand rejected under 35 U.S.C. §101 as being allegedly directed to non-statutory subject matter.

Without conceding the propriety of the stated rejections, and only to advance the prosecution of this application, Applicant amends **Claims 9-12, 19, and 20** to clarify further features of the subject matter. For example, amended Claim 9 recites in part, "a computer-readable storage media having processor-executable instructions, that when executed on a computing device, direct a computing system to". Support may be found at least at page 12 and in Figures 1, 20, and 25. This sets forth statutory subject matter as the claim is structurally and functionally interrelated to the medium.

Claims 10-12, 19, and 20 as amended, recite features similar to those in Claim 9 and hence benefit from the same arguments. Applicant respectfully submits that the claims now comply with 35 U.S.C. §101 and respectfully requests that the §101 rejections be withdrawn.

Statement of Substance of Interview

Applicant appreciates the Examiner's participation in a telephonic conference of August 14, 2007. Applicant wishes to thank the Examiner for her time and consideration.

During the interview, the claimed subject matter of the application and the David reference were discussed. In particular, Applicant presented arguments along the lines of those set forth below in the section entitled "Claim Rejections 35 U.S.C. §102". Specifically, Applicant presented arguments as to how the subject matter in the application fails to disclose features, such as computing cadence and stride.

Also discussed during the interview were proposed amendments to the claims. In the interest of expediting prosecution of the application, and without conceding the propriety of the rejection, Applicant proposes to amend the independent claims to further clarify features of Applicant's claimed subject matter. Applicant understands that the Examiner tentatively agrees that the proposed amendments overcome the outstanding rejections based on David. The Examiner indicates that an updated search would be needed, and requests that the proposed amendments be presented in writing.

Accordingly, Applicant amends the independent claims herein, as discussed during the interview. Applicant submits that all of the pending claims are in condition for allowance.

Claim Rejections 35 U.S.C. §102

Claims 1-8, 12, and 14-15 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,816,603 B2 to David et al. (hereinafter "David"). Applicant respectfully traverses this rejection. Anticipation under §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference (MPEP §2131).

Independent Claim 1 recites:

A method for determining height parameters that describe a dynamically varying height of an ambulatory subject based on video analysis of the subject, comprising:

acquiring a sequence of images that collectively captures a gait of the subject, wherein the gait comprises stride and cadence;

computing cadence, wherein $C = 120 \times \text{frames in seconds} / T$, $C=\text{cadence}$, $T=\text{period of the subject's gait in frames per cycle}$;

computing stride length, wherein $L = W / n/T$, $L=\text{stride length in meters}$, $W=\text{distance traveled along a path in meters}$, $n=\text{number of frames used in performing analysis}$, $T=\text{period of the subject's gait in frames per cycle}$ and $n/T=\text{number of gait cycles that subject traverses over } n \text{ frames}$;

measuring a dynamically varying height function of the subject based on an analysis of the varying height of the subject in the sequence of images;

fitting the dynamically varying height function of the subject to a model that describes varying height; and

identifying the subject based on the gait and height;
wherein the height parameters correspond to parameters used in the model.

Applicant respectfully submits that there is no such method for determining height parameters is disclosed by David.

David Fails to Disclose Computing Cadence and Stride

David is tracking changes in gait to indicate difficulty with neurologic and musculoskeletal functions (col. 3, lines 27-30). Motion portraits are used to determine the existence of trends demonstrating improvement, deterioration, or no change in a subject's condition (col. 14, line 67 to col. 15, line 3). David compares silhouette images or outline images of the subject (col. 5, lines 60-61) to previous or good health images of the subject to draw diagnostic conclusions (col. 15, lines 6-11).

Applicant asserts that David fails to disclose "computing cadence, wherein $C = 120 \times$ frames in seconds / T , C =cadence, T =period of the subject's gait in frames per cycle; computing stride length, wherein $L = W / n/T$, L =stride length in meters, W =distance traveled along a path in meters, n =number of frames used in performing analysis, T =period of the subject's gait in frames per cycle and n/T =number of gait cycles that subject traverses over n frames", as recited in Applicant's Claim 1. Thus, David fails to disclose the recited features. Consequently, Applicant respectfully requests that the §102 rejection be withdrawn.

Independent Claim 5 is directed to an apparatus, and is allowable for reasons similar to those discussed above with respect to Claim 1.

Dependent Claims 2-4, 6-8, 12, 14, and 15 depend directly or indirectly from one of independent Claims 1 and 5, respectively, and thus are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in Claims 1 and 5, are not disclosed by David. Applicant respectfully requests that the §102 rejection be withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 9-11, 13, and 16-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over David in view of U.S. Patent Application Publication No. 2002/0028003 to Krebs et al. (hereinafter "Krebs"). Applicant respectfully traverses the rejection.

Independent Claim 9 recites:

A computer-readable storage media having processor-executable instructions, that when executed on a computing device, direct a computing system to:

generate a sequence of images that collectively captures a gait of the subject, wherein the gait comprises stride and cadence;

compute cadence, wherein $C = 120 \times \text{frames in seconds} / T$, $C=\text{cadence}$, $T=\text{period of the subject's gait in seconds}$;

compute stride length, wherein $L = W / n/T$, $L=\text{stride length in meters}$, $W=\text{distance traveled along a path in meters}$, $n=\text{number of frames used in performing analysis}$, $T=\text{period of the subject's gait in frames per cycle}$ and $n/T=\text{number of gait cycles that subject traverses over n frames}$;

measure a dynamically varying height function of the subject based on an analysis of the varying height of the subject in the sequence of images;

analyze the dynamically varying height function of the subject to a model that describes varying height, wherein one or more height parameters correspond to parameters used in the model;

extract the one or more height parameters associated with the gait of the subject;

compare the extracted one or more height parameters associated with the gait of the subject to identified gait information corresponding to individuals; and

identify the subject based on the gait of the subject.

Applicant respectfully submits that no such computer readable storage media is taught or suggested by David or Krebs.

David Fails to Teach or Suggest Computing Cadence and Stride

As explained above with respect to the rejection under §102, Applicant submits that David fails to disclose “computing cadence, wherein $C = 120 \times \text{frames in seconds} / T$, $C=\text{cadence}$, $T=\text{period of the subject's gait in frames per cycle}$; computing stride, wherein $L = W / n/T$, $L=\text{stride length in meters}$, $W=\text{distance traveled along a path in meters}$, $n=\text{number of frames used in performing analysis}$, $T=\text{period of the subject's gait in frames per cycle}$ and $n/T=\text{number of gait cycles that subject traverses over } n \text{ frames}$ ”, as recited in Applicant's Claim 1. Thus, David fails to disclose, teach or suggest these recited features.

The Cited Art Provides No Suggestion or Motivation to Modify or Combine the References

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings (MPEP §2142). The Office stated the motivation to combine David's method of monitoring subjects with Krebs's method of using anatomy and gait parameters to distinguish individuals in order to better identify the subjects being monitored (Office Action, page 9). However, there is nothing in either of the references that would suggest this motivation. In addition, David already uses anatomy and gait parameters to monitor individuals. Thus, there is no need to combine the two references. The asserted motivation relies on hindsight without evidence of teaching or suggestion to propose the suggested combination. Thus, this rejection is improper for this additional reason.

Neither David nor Krebs teach or suggest at least the foregoing features, whether considered alone or in combination. David and Krebs are not properly combined under

§103. Accordingly, David and Krebs do not support a §103 rejection of Claims 9-11, 13, and 16-20. Therefore, Applicant requests reconsideration and withdrawal of the §103 rejections.

Conclusion

Claims 1-20 are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the subject application. If any issue remains unresolved that would prevent allowance of this case, the Examiner is requested to contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

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